

Article

The Impact of Communication on the Effectiveness of Educational Organizations

Vasiliki Brinia ¹, Panagiota Selimi ¹, Alexandros Dimos ^{2,*} and Anna Kondea ²

¹ School of humanities, Hellenic Open University, 26335 Patras, Greece; vbrinia@aueb.gr (V.B.); pselimi@gmail.com (P.S.)

² School of Information Sciences and Technology, Athens University of Economics and Business, 10434 Athens, Greece; annakondea@gmail.com

* Correspondence: a.dimos@acg.edu

Abstract: The purpose of this study was to research the level of satisfaction teachers received from communication within their working environment, their sense of the effectiveness of the institution itself, as well as the relationship between these factors. A quantitative method was used in the study. A total of 296 questionnaires were answered by teachers aged 25–64. Statistical analysis of the data was performed using the statistical software SPSS, while for the implementation of the statistical tests we applied the independent-samples T-test parametric, as well as one-way ANOVA, Kruskal–Wallis, and Mann–Whitney parametric statistical criteria. According to the results, the teachers showed high levels of satisfaction with the communication related to their feedback and believed that both parents and the local community do not participate actively in the school life. The development of an effective communication system within an educational institution can potentially become the driving force for effective functioning. The study complements the existing research on communication as a factor in the effectiveness of an educational organization. It highlights the dynamics of the teachers' association to the greatest possible extent, attempting to link the communication factor to all aspects of school effectiveness.



Citation: Brinia, V.; Selimi, P.; Dimos, A.; Kondea, A. The Impact of Communication on the Effectiveness of Educational Organizations. *Educ. Sci.* **2022**, *12*, 170. <https://doi.org/10.3390/educsci12030170>

Academic Editor: John De Nobile

Received: 19 October 2021

Accepted: 23 February 2022

Published: 28 February 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Keywords: sense of effectiveness; satisfaction with communication; communication climate; educational institution; primary schools

1. Introduction

The educational institution is a social system in which stakeholders interact within a given system of values and rules. In Greece, schools have teachers' associations. These bodies operate within the educational institution. The teachers' association is the main management body of the educational institution, because it deals with the key issues relative to its operation. It is a collective body made up of all school teachers in all forms of working relationships and is chaired by the head of the educational institution [1]. The issue of defining an effective educational institution is particularly complex. The school effectiveness is defined as the ability of the educational organization to achieve its goals with the least possible waste of resources or with the body's ability to provide resources [2]. The communication, as a concept, is complex and complicated [3]. Generally, this is a form of interaction in which various messages are transmitted or exchanged. According to Hoy and Miskel [4], communication is a process whereby messages are transmitted from sources using symbols and messages, so that the recipients understand the messages in the same way and influence their behavior. Educational organizations, like other organizations, depend on effective communication, which is one of their vital traits, to ensure their purposes and goals are achieved [5].

The effectiveness of the educational organization cannot be attributed by any definition. Based on the literature, however, there are a number of factors that the school must have in

order to be considered effective [2]. In the present study, the term “effectiveness” refers to educational leadership, teachers’ expectations and behavior, teaching, performance appraisals, and parent and community involvement in school work. In literature, school effectiveness essentially expresses the degree of success of the goals set within the school [2]. An organization such as a school through the application of the right methods will be able to achieve all the goals it has set.

In the present research, the term “communication satisfaction” refers to teachers’ satisfaction with the flow of information, their sense of integration into the organization, the quality of the media, and the forms and methods of communication, as well as their satisfaction with the information about the organization as a whole, in relation to the school principals, and in the information concerning their feedback.

1.1. Communication

Communication, as a concept, has attracted the interest of scholars and researchers of different scientific fields and backgrounds. It can have different interpretations and definitions depending on the approach followed. In general, this is a form of interaction in which various messages are transmitted or exchanged.

The various technical definitions of communication available in the literature describe communication as an interactive process between at least two people, the transmitter and the receiver. This interactive process indicates that communication is a dynamic and constantly changing process. Through communication we change the content of words and messages [6]. Interaction between the involved reference groups is a necessary component for a modern school to overcome its problems and operate with total quality [7].

1.2. Structural Communication Elements

Communication is not a simple process of transmitting information but a complex process that presupposes the existence of basic structural elements that determine its effectiveness [8]. The first structural element is “the source of the information or transmitter of the message”. The role of the source is important in the communication process. The source needs to give a personal tone to their messages, which must be reliable and bring together their knowledge and experiences [9]. The second is “codification”. This is the process by which the transmitter is driven by the conception of the idea to the creation of the message. Ideas and perceptions take the form of fixed symbols, such as words, movements, numbers, and the tone of voice [10]. The third is “message transmission”, whereby the message is transmitted through a channel. The channels, or means of transmitting the message, are constantly increasing due to the rapid development of technology. The fourth is “decoding”. This is a mental process in which the recipient of the message tries to interpret it and tries to turn it into information [11]. The latest is “message response and feedback”. This is the phase at which the communication process is completed. From the process of communication, it becomes clear that its effectiveness is related to the ability of people to understand and interpret in order to interact. The feedback process in which the sender knows that the recipient has received the message and is understood in a way that responds to the sender’s intention proves that real communication is reciprocal. The communication purpose is fulfilled when both the transmitter and the receiver understand each other [10].

1.3. Communication Effectiveness for the Educational Institution

Communication constitutes a crucial factor in each organization and has great importance for goal achievement in each organization as the persons involved cultivate a team spirit and unite their forces by communicating with each other. They obtain a common vision and manage their behaviors so that they correspond to their common goals.

The role of the hierarchical culture in effecting change in organizations provides new and significant insights into organizational culture regarding change management issues and the challenges facing such organizations [12]. Communication in the educational

institution is the basis on which the educational practice is built. It is the process that leads to the achievement of its goals [13].

The teachers' association is the main governing body of the educational institution because it deals with the main issues concerning its operation. It is a social organization, as it has rules, roles, hierarchy, power, and emotional relationships [14]. In order to enhance their work, the members of the teachers' association are called upon to interact with each other, to exchange messages in various ways, and to understand the attitudes and views of others. They are asked to communicate in order to make the right decisions. The effectiveness of human interaction can be compromised by obstacles that might arise. The communication process can be ineffective for many reasons. However, a key factor for success or failure is the personality of the communicators and their willingness to learn to communicate effectively and to recognize the need for communication [15].

The concept of efficiency is multidimensional and a single definition cannot be given. The effectiveness of an educational institution depends on many factors that refer to every aspect of its activity [2]. Identifying these factors will capture the characteristics of an effective educational institution. The interest in determining the factors of school effectiveness is demonstrated by the plethora of research that has been carried out.

The first person who established the key factors of effectiveness was Edmonds [16]. According to him, an effective school is determined by four factors: (1) strong management; (2) school climate; (3) high expectations for student performance; (4) an emphasis on the acquisition of basic educational skills. [17] Farrell introduced the factors of school effectiveness to the ability of the school to integrate students who are experiencing difficulties and to be interested in their learning and progress. According to [18], effective schools are determined by the cooperation between school and family, the professional administration, and the organization of the school environment, as well as having high expectations. The concept of the school climate is directly related to a number of special internal features, which set the identity of each educational institution and differentiate it from the rest [19].

As with any organization, problems and conflicts also arise at school. In a positive school environment, problems are solved via democratic methods and cooperative strategies are adopted in conflict management. Conflicts are addressed in such a way as to satisfy all parties, improving the relationships of those involved as well as their ability to deal with upcoming conflicts in a constructive way [20].

Devos and Bouckenooghe investigated the relationship between school effectiveness and the behavior of principals as it is shaped by their perceptions regarding their leadership role [21]. According to the research, a necessary element for the development of teachers and their active involvement in school issues is the cultivation of team spirit by the school leader. Those principals who prioritize the human factor cultivate an open communication climate, and as managing executives have a leadership role and strive to achieve a common vision in conditions of mutual trust. In contrast, those who perceive their role as being coordinators with an emphasis on management cannot effectively support staff and instill a common vision. This results in the formation of a negative school climate that does not contribute to the effective operation of the school. The school's leadership and the policy-makers who cultivate an open communication climate can effectively enhance the academic achievement of students in a school context [12].

Each educational organization has its own culture that determines the communication climate, such as the atmosphere and conditions within which ideas, information, actions, and feelings are exchanged. Effective communication presupposes an open communication climate that provides security to people and will encourage them to take initiatives aimed at improving the functioning of the organization. In this climate, the communicating members develop equal communication relationships with each other and learn to cooperate and understand each other [2]. The principal of each educational organization, as the first among equals in the teachers' association, is a decisive factor in shaping a supportive communication climate.

Horizontal communication is developed by the people in the organization who are at the same hierarchical level. It is an important factor in improving the school climate, since it allows the coordination of all activities in the organization, as well as the development of good relations between its members [1].

Cooperation in the educational institution, as well as cooperation between educational institutions as a feature of efficiency, contributes to school effectiveness, as it increases students' self-esteem and helps them achieve their learning goals [22].

Gkolia et al. investigated the relationship between leadership and school self-efficiency in the Greek education system [23]. The results of this research showed that Greek school principals cannot create a common vision for their schools or spiritually engage teachers through collaboration.

Magen-Nagar et al., investigating the relationship between school climate and teaching quality and the impact on the effectiveness of the educational institution with a focus on students' learning achievements, concluded that a positive school climate and teaching quality contribute to learning achievement, as they contribute to the personal development of students and help them overcome the difficulties of their socio-economic environment [24]. The collaboration of teachers as a result of a supportive school climate is being investigated by Silva. Based on the results, teachers who feel the support of the principal and their colleagues actively collaborate in the design of study programs and participate in recreational, educational, and interdisciplinary activities. They are open to new ideas and are interested in shaping and achieving the school's goals.

Communication between principals and teachers as a factor of effectiveness was investigated by Arlestig [25]. According to this study, for an educational institution to function effectively, an efficient communication system between teachers and principals is required. However, there was also a lack of communication between principals and teachers in the less effective educational institutions.

The correlation of teacher–principal cooperation with communication satisfaction was investigated by Tuazon and Padiernos [26]. According to the results of the study, there is a significant degree of correlation between satisfaction with communication and cooperation between teachers and principals. Developing an effective communication system that allows teachers to be aware of the goals of the organization helps them to create harmonious relationships with each other, as well as with principals. Kamal et al. analyzed the relationship between communication satisfaction and the organizational identity of the educational organization as the main goal of their study [27]. According to the results of the study, satisfaction from communication is not closely related to the organizational identity.

Investigating teachers' perceptions of effective organizational communication was the subject of Gunbayi's research [28]. The results of the study showed that an effective communication system provides teachers with a commitment to contribute to the administration and organization of the educational institution.

Furthermore, the quality of media is a key factor in the existence of effective communication, as it reflects the usefulness, transparency, and quantity of information received by employees and related to the organization's channels, such as publications and presentations [20].

There are several studies in the educational literature [13,18] that address the issues of communication and school effectiveness. It is generally accepted that the principal is an important person in the educational organization, although the role of the teachers, who are considered to be the driving power, should not be underestimated. Through this perspective, the purpose of the present study is to explore communication between teachers in primary educational institutions and their effectiveness through the teachers' perspective. As already stated, the dimensions of communication satisfaction include the communication climate, the relationship with principals, the integration, the quality of the media, the horizontal and informal communication, the organizational perspective, and the feedback. Therefore, the research questions that are examined are the following:

How satisfied are teachers communicating with the educational organization they work for?

How effective do teachers find the educational organization?

What is the relationship between teacher satisfaction with communication and the effectiveness of the organization?

2. Materials and Methods

2.1. Method

In this study, we considered that the most appropriate way to analyze the paper's main topic, namely the investigation of teachers' satisfaction with communication in educational organizations and the impact on the effective operation of the educational organization, was to use the poll methodology, as we were interested in mapping the attitudes of teachers, meaning that we were interested in what is happening or not happening [29]. For this reason, we chose to explore efficiency as a component of its factors rather than focusing on a single factor. Thus, we developed our own questionnaire to measure this variable with 21 questions closely related to the literature, while at the same time we adopted the criteria and procedures of a quantitative methodological design based on the papers' research goals [30]. In order to study a large part of the population in a short period of time and to analyze the data collected statistically, the quantitative research approach was used.

2.2. Sample and Demographics

The present research effort was conducted within the context of Greek educational institutions of the Eastern Attica Primary Education Directorate. Specifically, 341 questionnaires were given to 17 primary schools of the East Attica Primary Education Directorate and 296 were completed. In terms of gender, our sample consisted of 231 women and 65 men. Our sample was grouped into 4 age groups. The first group included 69 teachers aged 25–34 years. The second group consisted of 95 teachers aged 35–44. The third age group included 119 teachers and covered the ages of 45–54 years, while the fourth group consisted of 13 teachers aged 55–64 years. The sample data on total service were grouped into 3 categories. The first included 84 teachers working from 1 to 10 years in education. The second category comprised 132 teachers with 11 to 20 years of service. The third category consisted of 80 teachers with 20 or more years of service. In terms of years of service in the same educational institution, our sample was divided into 3 groups. The first included 129 teachers who serve 1 or 2 years in the current educational institution. Eighty-nine teachers had from 3 to 10 years of service in the same educational institution. Seventy-eight teachers had worked in the same school for more or 11 years. The sample was grouped into 4 categories based on the study criteria. The first category covered 132 teachers, who had not completed any further studies than those required to hire them. Twenty-six teachers had a second degree. There were 130 teachers at the postgraduate level, while 8 teachers held a doctorate. Appendix A contains a detailed table with the sample data.

2.3. Data Analysis

The responses collected from the questionnaires were coded and entered into a data file so that their statistical processing and analysis were feasible. The program used to process our data was SPSS v22. Based on the questions in the questionnaire corresponding to each dimension of communication, the following complex variables were identified: (1) integration; (2) communication climate; (3) quality of media; (4) horizontal and informal communication; (5) perspective in the organization; (6) relationship with supervisors and feedback. The composite variable "communication satisfaction" resulted from the sum of these variables. Respectively, based on the questions in the questionnaire corresponding to efficiencies, the following complex variables were generated: educational leadership, behavior training, teaching, school climate, assessment of students, and parent involvement. The composite variable "sense of effectiveness" was also apparent from the sum of these variables. In conclusion, for the implementation of the statistical tests, we chose to use the

independent-samples T-test parametric, as well as the one-way ANOVA, Kruskal–Wallis, and Mann–Whitney parametric statistical criteria.

2.4. Reliability of the Questionnaire

As Rovai states, the questions in the questionnaire should be closely linked to the ideas reflected in the aforementioned literature in order to ensure the validity of the content and structure of the research tool [31]. In the present research, the questionnaire consisted of questions that arose from the literature related to both communication in schools and school effectiveness. This ensured the validity of content and structure of our research tool.

The questionnaire, as a research tool, gathers a lot of information but does not guarantee honest answers from the participants, as it can lead to the rationalization of their answers [6]. In the present research effort, we sought to extract as much as possible the real opinions of the participants, emphasizing that their anonymity was ensured and that the study would acquire meaning by capturing the real situation rather than the ideal situation.

Additionally, the questionnaire assessed the validity of the conceptual construction process both for the independent variables that we included in it and for the dependent ones. Regarding the dependent variables, this validity was ensured through factor analysis [32]. Both dependent variables (communication satisfaction, school effectiveness) were broken down into individual factors so as to be more clearly identified. Additionally, for each factor there were many questions in our questionnaire, which increased the reliability of our study [33]. In Appendix A, a reliability statistics table is presented regarding the dependent values.

In addition, this questionnaire related to satisfaction with communication has been used in other surveys in many countries [20,27,28], which increases its validity and reliability.

In addition, in the variables of the questionnaire, the Cronbach alpha reliability coefficient was checked, which is an indicator of internal relevance for all questions that measure the same characteristic [33]. Specifically, for the variable “communication satisfaction” the Cronbach alpha index was 0.928, while for the variable “sense of efficiency” the index value was 0.913, which were both acceptable values since they were greater than 0.8 [33].

Finally, the use of a pilot questionnaire helped to ensure the validity of the questionnaire, since through this process we determined the extent to which the questions were clear and understandable. Specifically, the questionnaire was given to five teachers who were asked to read the questions, identify ambiguities, and make their comments. No question needed to be changed, as they were all considered understandable, but some words were replaced with others that conveyed the meaning more accurately.

3. Results

The questionnaire measures 7 dimensions of communication, as presented in literature: the communication climate, integration into the organization, the relationship with superiors, the quality of media, informal and horizontal communication, the perspective in the organization, and the feedback of employees.

The communication climate refers to the motivation of the employees to achieve the goals of the organization (question 14), identification with the organization (questions 16, 18), the efficient flow of information (question 21), and the overall assistance of the communication channels in management conflicts (question 22).

The relationship with principals involves two-way communication between principal and teachers. The principal’s communication skills (question 15), their leadership role (questions 17, 29), their confidence in teachers (question 20), and their attitude towards new ideas (question 24) are examined.

Questions 1, 2, and 7 refer to the information that helps teachers feel part of the organization. In other words, they measure the level of integration.

Informal and horizontal communication refers to the spread of rumors and inaccurate information (questions 23, 25, 32), the sense of identification of views with partners

(question 27), and the sense that this form of communication can work in emergencies (question 26).

The quality of the media reflects the information that employees receive regarding their usefulness in carrying out their work (question 19), the quantity of information (question 33), the quality of instructions (question 30), and the quality of communication channels (questions 28, 31).

Questions 4, 5, 6, 10, and 13 refer to the feedback of employees through communication on issues related to the evaluation of their work, the effort they make, and the understanding of the problems they face.

Finally, the perspective of the organization refers to information regarding the organization as a whole, such as its objectives (question 3), the changes that affect it (questions 8, 9), its financial situation (question 11), and its successes or failures (question 12).

3.1. Relationship between Gender and Communication Satisfaction

According to the results of the t test for equal variations (Levene $p = 0.277$), we found that $t(195) = 2.173$, with $p = 0.031$, while the difference of means was real, with a value of 2.01. Therefore, there was a statistically significant difference between the averages for male and female teachers in terms of satisfaction with communication in an educational organization, meaning it seems that male teachers are more satisfied than females in terms of communication in teaching organizations.

3.2. Relationship between Age and Satisfaction from Communication

According to the results of the analysis, there were no statistically significant differences between the three age groups of teachers in terms of their satisfaction with communication in the educational organization $X^2(2,197) = 1082$, $p = 0.582 > 0.05$. Additionally, as shown in Table 1, no statistically significant differences were found in the correlation of age with each of the 7 dimensions of communication.

Table 1. Dimensions of communication–age results.

Dimension	Statistical Criterion	Result
Integration	Kruskal–Wallis	$X^2(2,197) = 0.257$, $p = 0.880 > 0.05$
Perspective	Kruskal–Wallis	$X^2(2,197) = 2.857$, $p = 0.240 > 0.05$
Feedback	Kruskal–Wallis	$X^2(2,197) = 0.399$, $p = 0.819 > 0.05$
Communication Climate	Kruskal–Wallis	$X^2(2,197) = 2.806$, $p = 0.246 > 0.05$
Relationship with Supervisors	Kruskal–Wallis	$X^2(2,197) = 0.812$, $p = 0.666 > 0.05$
Media Quality	Kruskal–Wallis	$X^2(2,197) = 1.497$, $p = 0.473 > 0.05$
Horizontal Unofficial Communication	Kruskal–Wallis	$X^2(2,197) = 1.739$, $p = 0.419 > 0.05$

3.3. Relationship between Overall Service and Communication Satisfaction

According to the results of the analysis, there were no statistically significant differences between the three groups concerning the overall service of teachers in terms of their satisfaction with communication in the educational organization ($X^2(2,197) = 0.873$, $p = 0.646 > 0.05$). In addition, we found a statistically significant difference in the correlation of the total service with 6 of the 7 dimensions of communication, as shown in Table 2.

Regarding informal and horizontal communication, a statistically significant difference was found between the averages of the groups of teachers based on their total years of service ($X^2(2,197) = 6318$, $p = 0.042 < 0.05$), as shown in Table 3. According to the results of the analysis, it was observed that teachers who had worked in education from 11 to 20 years stated that they were more satisfied (higher average) than those who had worked for more than 20 years.

Table 2. Dimensions of communication results—total service.

Dimension	Statistical Criterion	Result
Integration	ANOVA	$F(2,194) = 0.526, p = 0.592 > 0.05$
Perspective	Kruskal–Wallis	$X^2(2,197) = 1.929, p = 0.381 > 0.05$
Feedback	ANOVA	$X^2(2,196) = 0.305, p = 0.737 > 0.05$
Communication Climate	Kruskal–Wallis	$X^2(2,197) = 0.894, p = 0.639 > 0.05$
Relationship with Supervisors	Kruskal–Wallis	$X^2(2,197) = 0.954, p = 0.621 > 0.05$
Media Quality	Kruskal–Wallis	$X^2(2,197) = 2.442, p = 0.295 > 0.05$
Horizontal Unofficial Communication	Kruskal–Wallis	$X^2(2,197) = 6.318, p = 0.042 < 0.05$

Table 3. Importance control results between horizontal and unofficial communication groups in relation to the overall service.

Total Service Categories	Statistical Criterion	Result
1:1–10 2:11–20	Mann–Whitney	$Z = -1.513, p = 0.130 > 0.05$
2:11–20 3:21+	Mann–Whitney	$Z = -2.326, p = 0.020 < 0.05$
Mean Rank: 77.19 Mean Rank: 60.72		
1:1–10 3:21+	Mann–Whitney	$Z = -1.208, p = 0.227 > 0.05$

Relationship of service years in the same educational institution and communication satisfaction.

The one-way ANOVA test gave us the result of $F(2,196) = 0.852, p = 0.428 > 0.05$, according to which there was no statistically significant difference between the three groups of teachers regarding the years they had worked in same educational institution in terms of their satisfaction with the communication. In addition, by controlling for the relationship of service years in the same educational institution with the individual dimensions of communication satisfaction, it appeared that in 6 of the dimensions there were no statistically significant differences in the averages of the three groups of exponents, as shown in Table 4.

Table 4. Dimensions of communication results—service in the same educational institution.

Dimension	Statistical Criterion	Result
Integration	ANOVA	$F(2,192) = 2.384, p = 0.095 > 0.05$
Perspective	ANOVA	$F(2,195) = 3.376, p = 0.035 < 0.05$
Feedback	ANOVA	$F(2,196) = 0.538, p = 0.585 > 0.05$
Communication Climate	ANOVA	$F(2,196) = 1.078, p = 0.342 > 0.05$
Relationship with Supervisors	Kruskal–Wallis	$X^2(2,197) = 3.121, p = 0.210 > 0.05$
Media Quality	Kruskal–Wallis	$X^2(2,197) = 1.941, p = 0.379 > 0.05$
Horizontal Unofficial Communication	ANOVA	$F(2,195) = 0.090, p = 0.914 > 0.05$

Regarding the perspective in the educational organization, a statistically significant difference was found between the averages of the groups of teachers based on the years of service in the same educational institution ($F(2,195) = 3.376, p = 0.035 < 0.05$), whereby the teachers working in same educational institution from 3 to 10 years declared that they were more satisfied with the communication regarding the perspective in the organization in relation to those who had worked in the same educational institution for 0 to 2 years.

3.4. Relationship between Studies and Satisfaction with Communication

According to the results of the t test for equal variations, we found that $t(195) = 0.028$, with $p = 0.977 > 0.05$, so there was no statistically significant difference between the averages of the groups of teachers based on the studies in terms of satisfaction from communication

in an educational organization. The same result was found for the control of each dimension of communication separately.

3.5. Relationship between Educational Institution and Satisfaction with Communication

According to the results, there were statistically significant differences between the 17 educational institutions in terms of teacher satisfaction with communication in the educational organization, with $\chi^2(10,197) = 25.847, p = 0.004 < 0.05$.

3.6. Sense of Effectiveness

3.6.1. Relationship between Gender and Sense of Effectiveness

According to the results of the t test for equal variations (Levene $p = 0.210$), analyses revealed that $t(195) = 1.615$, with $p = 0.108$ and a mean difference of 1.17; therefore, there was no statistically significant difference between the average of men and women teachers in terms of the sense of effectiveness of the educational organization. Finally, the average for men was (23.12), slightly higher than that for women (21.95), although the difference was not statistically significant.

3.6.2. Relationship between Age and Sense of Effectiveness

The one-way ANOVA test gave us the result of $F(2,195) = 0.524, p = 0.593 > 0.05$. Therefore, there was no statistically significant difference between the three age groups of teachers in terms of the effectiveness of the educational institution. The results for each dimension are shown in Table 5.

Table 5. Dimensions of effectiveness–age relationship.

Dimension	Statistical Criterion	Result
Educational Leadership	Kruskal–Wallis	$\chi^2(2,197) = 0.483, p = 0.785 > 0.05$
Expectations of Teachers' Behavior	One-way ANOVA	$F(2,193) = 3.387, p = 0.036 < 0.05$
Teaching	One-way ANOVA	$F(2,188) = 0.460, p = 0.632 > 0.05$
School Climate	Kruskal–Wallis	$\chi^2(2,197) = 1.363, p = 0.506 > 0.05$
Student Assessment	One-way ANOVA	$F(2,191) = 1.144, p = 0.321 > 0.05$
Parental Participation	One-way ANOVA	$F(2,194) = 1.963, p = 0.143 > 0.05$

The two age groups of teachers who presented a statistically significant difference ($p = 0.032$) between the mean of the “teachers' expectations and behavior” dimension were those aged 25–34 and 35–44. Observing Table 1, we can see that the age group of 35–44 considered that the educational institution working is more effective for this dimension in relation to the age group of 25–34 (Table 6).

Table 6. Descriptive data for the age groups.

Age Group	N	Mean	Minimum	Maximum
25–34	69	37,011	1.75	5.00
35–44	95	40,410	2.75	5.00
45–64	132	39,540	2.25	5.00
Total	296	39,214	1.75	5.00

3.6.3. Relationship between Overall Service and Sense of Effectiveness

The one-way ANOVA test gave us the result of $F(2,194) = 1596, p = 0.205 > 0.05$, meaning there was no statistically significant difference between the three groups of teachers regarding total service in terms of the sense educational institution effectiveness. There was no statistically significant difference from the control test we performed on the individual dimensions of effectiveness, as shown in Table 7.

Table 7. Dimensions of the effectiveness–total service relationship control results.

Dimension	Statistical Criterion	Result
Educational Leadership	One-way ANOVA	$F(2,193) = 2.897, p = 0.058 > 0.05$
Expectations Teachers' Behavior	Kruskal–Wallis	$X^2(2,197) = 4.071, p = 0.131 > 0.05$
Teaching	Kruskal–Wallis	$X^2(2,197) = 1.447, p = 0.485 > 0.05$
School Climate	Kruskal–Wallis	$X^2(2,197) = 3.508, p = 0.173 > 0.05$
Student Assessment	Kruskal–Wallis	$X^2(2,197) = 3.012, p = 0.222 > 0.05$
Parental Participation	One-way ANOVA	$F(2,194) = 2.811, p = 0.0643 > 0.05$

3.6.4. Relationship of Service Years in the Same Educational Institution and Sense of Effectiveness

The one-way ANOVA test gave us the result of $F(2,194) = 0.496, p = 0.609 > 0.05$. Therefore, there was no statistically significant difference between the averages of the three groups of teachers (based on years of service in the same educational institution) in terms of the sense of effectiveness of the educational institution. We obtained the same result in terms of a lack of statistically significant differences from the control as we did for the individual dimensions of effectiveness, according to Table 8.

Table 8. Effectiveness over size and results over service relationships.

Dimension	Statistical Criterion	Result
Educational Leadership	Kruskal–Wallis	$X^2(2,197) = 0.871, p = 0.647 > 0.05$
Expectations Teachers' Behavior	One-way ANOVA	$F(2,195) = 1.877, p = 0.156 > 0.05$
Teaching	Kruskal–Wallis	$X^2(2,197) = 0.404, p = 0.817 > 0.05$
School Climate	Kruskal–Wallis	$X^2(2,197) = 1.190, p = 0.552 > 0.05$
Student Assessment	Kruskal–Wallis	$X^2(2,197) = 2.009, p = 0.366 > 0.05$
Parental Participation	One-way ANOVA	$F(2,195) = 1.369, p = 0.257 > 0.05$

3.6.5. Relationship between Studies and Sense of Effectiveness

According to the results of the t test for equal variations, we found that $t(194.595) = 2.274$, with $p = 0.024 < 0.05$ and a difference of means 1.32. As a result, there was a statistically significant difference between the average number of teachers who had undertaken basic studies and those who had undertaken additional studies in terms of the sense of effectiveness of the educational organization. We observed that the average for the teachers who had undertaken basic studies (22.9), higher than the result for teachers who had undertaken additional studies (21.6). Therefore, teachers who had undertaken basic studies, as compared to those who had undertaken additional studies, considered the educational organization in which they worked more effective.

3.6.6. Educational Institution Relationship and Sense of Effectiveness

According to the results of the analysis, $F(10,192) = 1900, p = 0.048 < 0.05$, meaning we observed statistically significant differences between the 17 educational institutions in terms of the sense of effectiveness that teachers had for the educational institution in which they worked.

4. Discussion

In this section, an attempt is made to interpret the findings of the present study in relation to the literature and studies conducted in the same research field.

4.1. Satisfaction with Communication by Dimension

According to the results presented in the previous section, the communication related to relationships with seniors is more satisfactory for teachers compared to the communication related to their feedback. In the other dimensions, they show almost the same

degree of satisfaction. These findings are in line with other research [20,34] in which the feedback dimension is last in the rankings. The feedback that the teachers have is obtained through informal processes, which are associated with the sense of acceptance by the school community. The teachers' performance depends on their abilities but also on their willingness to try to improve. It is, therefore, necessary for them to know what to do and how to do it [35].

4.2. Relationship Satisfaction from Communication with Individual and Work Factors

According to the results of our research, men are more satisfied with communication in their school than women. This means that both sexes differ in the way they communicate as well as in their communication needs. Women have a stronger need for "belonging" and tend to identify more with their workplace. Men are more satisfied only with the quality of the media, which is a separate dimension of communication [20]. Additionally, according to [28] there is no difference between the sexes, while according to [36] there is a significant difference between the sexes in terms of their satisfaction with communication. From the above studies, it seems that there is no agreement from the results regarding the effect that gender has on satisfaction with communication. The satisfaction with the communication for the teachers in the sample in our study does not seem to be related to their age. The same result was found in [34], while on the contrary Bozika found that older teachers are more satisfied with communication than their younger colleagues and argued that this is associated with the higher expectations that younger teachers may have [20]. Additionally, according to [28], younger teachers are less satisfied with communication than older ones. The length of total service of the teachers affects the satisfaction from informal and horizontal communication according to the results of our study, while the results do not differentiate the satisfaction from the other dimensions of communication. However, the years that our sample teachers have been working on the same educational institution is not related to communication satisfaction, with the exception of the dimension that concerns the educational organization's perspective.

Other studies find the same variations across all dimensions of communication. Newcomers to an educational organization are less satisfied with communication [20,34]. In addition, the level of education of teachers does not affect the satisfaction with communication according to the present study. In contrast, Gunbayi's study found that there is a difference in satisfaction with communication based on the level of education, arguing that teachers with a higher level of education say they are less satisfied [28].

4.3. Sense of Effectiveness per Dimension

Defining the expectations of the students and the relationships they cultivate with their teachers as a factor of the effectiveness of the educational organization, the research shows that the teachers consider an educational organization more effective when there are high expectations on the part of the students, as well as positive relationships between students and teachers. On the contrary, they believe that parents and the community do not participate enough in the work of the school. According to Bonia, teachers have a more positive attitude towards parental involvement in learning support and are less positive about their involvement in school activities [37]. Symeou reports that an effective school creates bridges that connect the school with the children's family experiences and is friendly toward parental involvement [38]. The need for active participation of parents in the work of the school is highlighted by the research of Mercouri and Stamatis [13]. Additionally, as Pasiardi states, the climate of schools that rely mainly on communication is perhaps the most important factor in their effectiveness and provides the importance of their very existence [2]. According to research by Tuazon, Padiernos, and Gunbayi, satisfaction with communication in an educational organization comes from the commitment of teachers to achieve their goals [26,28].

Researchers also argue that effective communication in a teachers' association leads to the development of positive interpersonal relationships, which determine school ef-

fectiveness [39]. Arlestig argues that a lack of communication between teachers leads to less effective educational organizations [25]. Finally, according to the research by Mercouri, Stamatis, and Lumby, the progress of students and the improvement of their learning achievements are related to the communication climate of the educational institution [13,22]. In the above research, it is pointed out that communication is either the cause or is associated with the aspect of effectiveness.

4.4. Relationship Satisfaction and Sense of Effectiveness

According to the results of the previous section, teacher satisfaction with communication in an educational organization is significantly related to their sense of effectiveness. According to [35], an effective communication system is a prerequisite for the effective implementation of the educational organization's goals.

4.5. Implications of the Study

The present study complements the existing research on communication as a factor of the effectiveness of the educational organization. However, many of the existing studies focus on the communication of the principal with the teachers as well as on the role of the principal in shaping the communication climate. Undoubtedly, the principal plays a catalytic role in the development of an effective communication system, which in turn contributes to the effective operation of the school. However, we consider that an important place in the configuration of the communication system is held by each teacher individually and mainly by the teachers' association as a team, since it is the dominant administrative body of the school. We tried to highlight this dynamic of the teachers' association in our work, but we cannot claim that we achieved it to the desired degree.

Additionally, in our study we tried to connect the communication factor with all aspects of school effectiveness, as they emerged from the study of the relevant literature and are presented in the theoretical context of our work. Many studies are designed based on the aspect of efficiency but mainly focus on learning outcomes, which are not the only goals of schools, the role of which is to develop mature and active citizens.

4.6. Implications for Practice

The effectiveness of school units in light of family and community relations in school work is at the lowest level according to the results of our research. This finding can be a starting point for reflection on the need for parents to seek new roles in educational organizations.

The need for continuous training for teachers in order to support their multifaceted work is a given in the modern educational literature. Our study confirms this need based on the correlation of the level of education with the sense of effectiveness and highlights that teachers with additional education view the effectiveness of their educational organization through a more demanding lens.

Communication in educational organizations and its relationship with their effectiveness is undoubtedly an important field to explore. This research effort was conducted in a limited geographical area and examined communication and efficiency based on teachers' perspectives. However, it would be useful to explore these dimensions not only from the perspective of teachers, but also from the perspectives of the parents and students, since they are also directly involved in the operation of schools. Furthermore, it would be interesting to study a broader and more representative sample in the Greek territory so that the results can be generalized. In addition, a study using a tool that can capture the individual behavior of each teacher during communication would be interesting, as well as their individual contributions to the effective operation of the school, in contrast to the tool used in the present research, which expresses the teachers' appreciation for the communicative behavior of others and their sense of the effective functioning of the school as a whole. Another important point is that the present study focused on the different senses of effectiveness that teachers have depending on their additional education, and it

appeared that the improvement of the sense of effectiveness of the educational organization lags behind their individual improvements. For this reason, it would be interesting to explore whether increasing the individual readiness of teachers could help improve the effectiveness of the organization, taking advantage of their additional capabilities. Moreover, the institution's sense of achieving its goals is important in order to investigate the students' opinion. In this way, the students' sense of effectiveness could be revealed. This could be achieved through qualitative research that permits the collection of important and beneficial empirical material that might not be considered in quantitative research or is considered a source of error, such as discrepancies and contradictions in the speech or behavior of subjects, pauses, and silences, which could be used as data and interpreted as indications of internal tension [40].

The dynamics of the teachers' association and its operation as a team could be the subjects of future research, as it is now clear that these factors significantly contribute to the formation of the special identity of the educational organization. The analysis of a case study at the teachers' association of a school unit would be highly interesting in order to capture its operation before and after the implementation of training programs on the communication and development of the teaching team. It would also be interesting to investigate the effect that the achievement of educational goals set by the teachers' association may have on the communication in a school unit. In conclusion, investigating the possible impacts of educational goals set by the teachers' association on communication in an educational institution may be the subject of future research. However, analyzing the issue of feedback in another study could highlight the needs of teachers around this issue.

5. Conclusions

The present study complements the existing research on communication as a factor of effectiveness of the educational organization. It highlights the dynamics of the teachers' association to the greatest possible extent, trying to link the communication factor to all aspects of school effectiveness.

As the findings show, if we know the degree of teacher satisfaction from the communication, then we can significantly predict its effectiveness. Therefore, an effective communication system should be an issue for everyone involved in educational organizations. However, given the particular identity of each educational institution, we come to the conclusion that an effective communication network in a teachers' association team has a positive effect on each member, despite their particular individual or labor characteristics. The present study highlights the need for teachers to be aware of the criteria by which their work is judged, as participants have a low level of satisfaction with the feedback they receive. Our study could contribute to the discussion around the need for teachers to receive feedback in order to improve their educational work. The teachers participating in this research consider that there is no coexistence of community and school in the Greek educational context, while teachers with additional education are more frugal in characterizing their educational institution as effective, as shown by the results of the present research. Nonetheless, without underestimating the impact of training programs that set common objectives in all educational institutions, we believe that there is a need for training at the school level.

In conclusion, it is worth emphasizing that the effectiveness of educational organizations, as well as the impact of communication within them, is a field of interest for any reference group in the school environment. From this point of view, the results of the present study could at least be of interest those involved in the functioning of educational organizations.

Author Contributions: Investigation, V.B.; Resources, A.K.; Writing—original draft, P.S. and A.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available in Appendix A.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Information regarding the study sample.

Gender Groups	Age Groups	Total Services (Categories)	Years in the Same Educational Institution (Categories)	Study Criteria (Categories)
Women 231 (78.17%)	69 teachers (23.4%)—25 to 34 years old (y.o.)	84 teachers (28.4%)—1 to 10 years in education(y.e.)	129 teachers (43.7%)—1 to 2 years	132 teachers (44.7%)—only required studies
Men 65 (21.83%)	95 teachers (32%)—35 to 44 y.o. 119 teachers (40.1%)—45 to 54 y.o. 13 teachers (4.6%)—55 to 64 y.o.	132 teachers (44.7%)—11 to 20 y.e. 80 teachers (26.9%)—20 or more years in education	89 teachers (29.9%)—3 to 10 years 78 teachers (26.4%)—11 or more years	26 teachers (8.6%)—second degree 130 teachers (44.2%)—postgraduate level 8 teachers(2.5%)—doctorate

Questions of the Questionnaire

School effectiveness

The table below contains various elements related to the effectiveness of school units. Please indicate how true each sentence is for your school by placing the appropriate number.

1. Not applicable at all
2. Probably not
3. Neither applies nor does not apply
4. Probably true
5. It is absolutely valid

Table A2. The questionnaire.

How Much Do You Think Each Sentence Is Valid:	1	2	3	4	5
The principal collaborates with teachers on school operational issues.					
The teachers of the school deal with the individual needs of each student.					
Teaching focuses on the student and not on the material.					
The teachers' association decides on the planning and implementation of the school's activities with a spirit of cooperation.					
The teachers of the school use the performance of the students to improve their own work.					
Parents communicate with teachers and the director in an organized manner.					
School teachers cultivate positive relationships with students.					
The teachers of the school choose the appropriate teaching strategies.					
The teachers of the school are interested in enriching their educational work.					
Students are evaluated in many ways.					
Parents have an active role in the implementation of school activities.					

Table A2. *Cont.*

How Much Do You Think Each Sentence Is Valid:	1	2	3	4	5
The principal shows interest and creates a favorable environment for innovation.					
Students' work is often corrected, with the aim of giving feedback to students.					
Conflicts are dealt with through democratic methods and cooperation.					
Students are evaluated in order for them to improve.					
The activities of the school are used to raise the awareness of the local community.					
The principal knows how to listen and communicate.					
The teachers of the school use supervisory and teaching material adapted to the needs of the students.					
The teachers of the school are in the mood to support their colleagues.					
The principal and teachers jointly shape the school's goals.					
Students are actively involved in the learning process.					

Table A3. Reliability statistics for dependent values.

Dependent Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Communication satisfaction	0.928	0.929	7
Sense of efficiency	0.913	0.916	6

References

1. Brinia, B. The implementation of Participatory Management in the school unit. In *Contemporary Issues of Educational Policy: Looking for the New School*; Karakatsani, D., Papadiamantaki, G., Eds.; Focus: Thessaloniki, Greece, 2012; pp. 89–110.
2. Pasiardi, G. The School Climate in Primary and Secondary Education—Theoretical and Empirical Investigation from the Point of View of Cypriot Teachers. Ph.D. Dissertation, AUTH, Department of Philosophy and Pedagogy, Department of Pedagogy, Thessaloniki, Greece, 2000.
3. Pasiardis, P. *Educational Leadership, from the Period of Favorable Indifference to the Modern Era*; Metaichmio: Athens, Greece, 2004.
4. Hoy, W.K.; Miskel, C.G. *Educational Administration: Theory, Research and Practice*, 8th ed.; McGraw–Hill: New York, NY, USA, 2008.
5. Pasiardi, G. *The School Climate, Theoretical Analysis and Experimental Investigation of Its Basic Parameters*; Typothito: Athens, Greece, 2001.
6. McCroskey, L.; McCroskey, J.; Richmond, V. Applying organizational orientations theory to employees of profit and non-profit organizations. *Commun. Q.* **2005**, *53*, 21–40. [[CrossRef](#)]
7. Brinia, V. Total quality in teaching and school effectiveness as tools of Administration of Education. *Int. J. Bus. Manag. Invent.* **2016**, *5*, 56–59.
8. Kambouridis, G. *Organization and Management of School Units*; Key number; Kledarithmos: Athens, Greece, 2002.
9. Koutouzis, M. *General Principles of Management, Tourism Legislation and Organization of Employers and Collective Bodies: General Management Authorities*; E.A.P.: Patras, Greece, 1999; Volume A.
10. Saiti, A.; Saitis, C. *Organization and Administration of Education: Theory, Research and Case Study*; Self-published: Athens, Greece, 2012.
11. Dubrin, A.J. *General Management Authorities*, 4th ed.; Athens, Greece, 1998.
12. Al-Ali, A.A.; Singh, S.K.; Al-Nahyan, M.; Sohal, A.S. Change management through leadership: The mediating role of organizational culture. *Int. J. Organ. Anal.* **2017**, *25*, 723–729. [[CrossRef](#)]
13. Mercouri, E.; Stamatis, P. Forms of communication between principal and high school teachers with parents and guardian students. *Sci. Step Teach.* **2009**, *10*, 137–148.
14. Jaques, D. *Teaching in Groups*; Metaichmio: Athens, Greece, 2001.
15. Stamatis, P. *Communication in Education*; Interaction: Athens, Greece, 2013.
16. Edmonds, R. *Effective Schools for the Urban Poor*; Educational Leadership, 1979; Available online: <https://www.semanticscholar.org/paper/Effective-Schools-for-the-Urban-Poor-Edmonds/550b740eb13c411d36d38f498293472cf64fdcef> (accessed on 18 October 2021).
17. Farrell, P. Making Inclusion a Reality for All. *Sch. Psychol. Int.* **2004**, *25*, 5–19. [[CrossRef](#)]

18. Bouzouki, M. School efficiency and effective principal. In Proceedings of the 3rd International Conference for the Promotion of Educational Innovation, Larissa, Greece, 13–15 October 2017; pp. 13–15.
19. Karatasios, G.; Karamitrou, A. The Formation of a Positive Climate as a Factor of Quality of the Educational Unit. 2008. Available online: <http://repository.edulll.gr/edulll/handle/10795/104> (accessed on 2 December 2018).
20. Bozika, E. Communication Climate and Teacher Confidence and Their Relationship with School Conflict Management Strategies. Master's Thesis, University of Thessaly, Thessaly, Greece, 2015.
21. Devos, G.; Bouckennooghe, D. An exploratory study on principals' conceptions about their role as school leaders. *Leadersh. Policy Sch.* **2009**, *8*, 173–196. [CrossRef]
22. Lumby, J. Collective Leadership of Local School Systems: Power Autonomy and Ethics. *Educational Management. Adm. Leadersh.* **2009**, *37*, 310–328. [CrossRef]
23. Gkolia, A.; Koustelios, A.; Belias, D. Exploring the association between transformational leadership and teacher's self-efficacy in Greek education system: A multilevel SEM model. *Int. J. Leadersh. Educ.* **2018**, *21*, 176–196. [CrossRef]
24. Magen-Nagar, N.; Azuly, D. The Contribution of School Climate and Teaching Quality to the Improvement of Learning Achievements, According to an External Evaluation System. *Creat. Educ.* **2016**, *7*, 1733–1784. [CrossRef]
25. Arlestig, H. Structural Prerequisites for Principals and Teachers Communication about Teaching and Learning Issues. *SAGE Publ.* **2008**, *11*, 189–203. [CrossRef]
26. Tuazon, A.; Padiernos, M. Communication Satisfaction and Working Relationship between Public School Heads and Teachers. *Prism* **2016**, *21*, 49–59. Available online: https://www.academia.edu/30617434/Communication_Satisfaction_and_Working_Relationship_Between_Public_School_Heads_and_Teachers_in_Calamba_City_Philippines (accessed on 30 March 2019).
27. Kamal, D.; Hasan, H.; Muati, A. Relationship between Communication Satisfaction and Organizational Identification: A UPM Case Study. 2013. Available online: http://eprints.usm.my/31920/1/Daniel_Kamal_Mustafa_Kamal%2C_Hamisah_Hasan%2C_Abdul_Muati_%40_Zamri_Ahmad.pdf (accessed on 30 March 2019).
28. Gunbayi, I. The Organizational Communication Process in Schools. *Educ. Sci. Theory Pract.* **2007**, *7*, 787–798. Available online: https://www.academia.edu/1322796/The_Organizational_Communication_Process_in_Schools (accessed on 30 March 2019).
29. Bell, J. *Methodological Design of Pedagogical and Social Research*; Gutenberg: Athens, Greece, 2001.
30. Creswell, J. *Research in Education*; Politeias: Athens, Greece, 2011.
31. Rovai, A.P. Development of an Instrument to Measure Classroom Community. *Internet High Educ.* **2002**, *5*, 197–211. Available online: <http://www.elsevier.com> (accessed on 5 December 2018). [CrossRef]
32. Galanis, P. Validity and reliability of questionnaires in epidemiological studies. *Arch. Greek Med.* **2013**, *30*, 97–110.
33. Makrakis, G.V. *Data Analysis in Scientific Research Using SPSS. From Theory to Practice*; Gutenberg: Athens, Greece, 2005.
34. Alanezi, A.S. Communication satisfaction and its relationship to organizational commitment among secondary teachers in Kuwait. Doctoral Dissertation, Indiana State University, Terre Haute, IN, USA, 2011.
35. Brinia, B. The social responsibility in the administration and in the operation of the educational organization. *Mod. Prim. Sch.* **2008**, *4*, 58–61.
36. Merchant, K. How Men and Women Differ: Gender Differences in Communication Styles, Influence Tactics, and Leadership Styles. CMC Senior Theses. 513. 2012. Available online: https://scholarship.claremont.edu/cmc_theses/513 (accessed on 5 December 2018).
37. Bonia, A. The Attitude of Teachers towards Parental Involvement in Primary School. Ph.D. Thesis, University of Ioannina, Department of Primary Education, Ioannina, Greece, 2010.
38. Symeou, L. Cultural capital and family involvement in children's education: Tales from two primary schools in Cyprus. *Br. J. Sociol. Educ.* **2007**, *28*, 473–487. [CrossRef]
39. Androulakis, E.; Stamatis, P. Forms of communication of teachers during the meetings of the Teachers' Association: Case study. *Sci. Step* **2009**, *10*, 107–118.
40. Isari, F.; Pourkos, M. *Qualitative Research Methodology. Applications in Psychology and Education*; SEAV: Athens, Greece, 2015.